

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An imaging apparatus having comprising:
an imaging section having a three primary color system color separation filter and a
complementary color system color separation filter; and
a signal processing section configured to generate three primary color signals by
performing matrix calculation process for output signals of the imaging section obtained by
using both, the three primary color system color separation filter and the complementary
color system color separation filter, when a luminance level of an image obtained by the
imaging section is a first luminance region, and to generate three primary color signals by
performing matrix calculation process for the output signals of the imaging section obtained
by using only the three primary color system color separation filter when the luminance level
of the image obtained by the imaging section is a second luminance region, which is higher
than the first luminance region; ~~an image inputting section composed of a frontend;~~ and
a signal processing section which processes a plurality of image signals supplied from
the image inputting section and generates three primary color signals,
wherein the imaging section has a three primary color system color separation filter, a
complementary color system color separation filter, and an imaging device to which color
lights separated by the color separation filters are input,
wherein the signal processing section performs a matrix calculating process for the
plurality of signals obtained by the three primary color system color separation filter and the
complementary color system color separation filter and generates three primary color signals
in a first region of which input image data are in a low/middle luminance level, and
wherein the signal processing section performs a matrix calculating process for three
primary color signals obtained by the three primary color system color separation filter and

~~generates three primary color signals in a second region of which the input image data are in a high luminance level.~~

Claim 2 (Currently Amended): The imaging apparatus as set forth in claim 1, wherein the three primary color system color separation filter ~~is composed of an~~ includes a R (red) filter, a G (green) filter, and a B (blue) filter, and the complementary color system color separation filter ~~includes~~ is composed of a Y (yellow) filter and a C (cyan) filter.

Claim 3 (Currently Amended): The imaging apparatus as set forth in claim 1, wherein the signal processing section includes

a first matrix calculation section configured to generate the three primary color signals by using a first matrix coefficients of which good noise characteristic when the luminance level of the image is lower than a predetermined boundary within the first luminance region, and

a second matrix calculation section configured to generate the three primary color signals by using a second matrix coefficients of which color reproducibility and noise characteristic are well balanced in the second luminance region has a first matrix calculating section which generates three primary color signals with first matrix coefficients emphasizing noise characteristic in the first region, a second matrix calculating section which generates three primary color signals with second matrix coefficients of which color reproducibility and noise characteristic are well balanced in the second region, and a mixing section which multiplies output signals of the first and second matrix calculating sections by gain coefficients and adds the products.

Claim 4 (Currently Amended): The imaging apparatus as set forth in claim 1, wherein the boundary of the first and second luminance regions is selected in a luminance level of which the imaging device is saturated through the complementary color system color separation filter.

Claims 5-7 (Canceled).

Claim 8 (New): The imaging apparatus as set forth in claim 1, wherein the signal processing section is configured to generate the three primary color signals by using a first matrix coefficients of which good noise characteristic when the luminance level of the image is lower than a predetermined boundary within the first luminance region, and to generate the three primary color signals by using a second matrix coefficients of which color reproducibility and noise characteristic are well balanced in the second luminance region.

Claim 9 (New): An image processing apparatus for processing output signals of an imaging device having a three primary color system color separation filter and a complementary color system color separation filter, said image processing apparatus comprising:

a signal processing section configured to generate three primary color signals by performing matrix calculation process for output signals of the imaging device obtained by using both, the three primary color system color separation filter and the complementary color system color separation filter, when luminance level of an image obtained by the imaging device is a first luminance region, and to generate three primary color signals by performing matrix calculation process for the output signals of the imaging device obtained by using only the three primary color system color separation filter when luminance level of

the image obtained by the imaging device is a second luminance region, which is higher than the first luminance region.